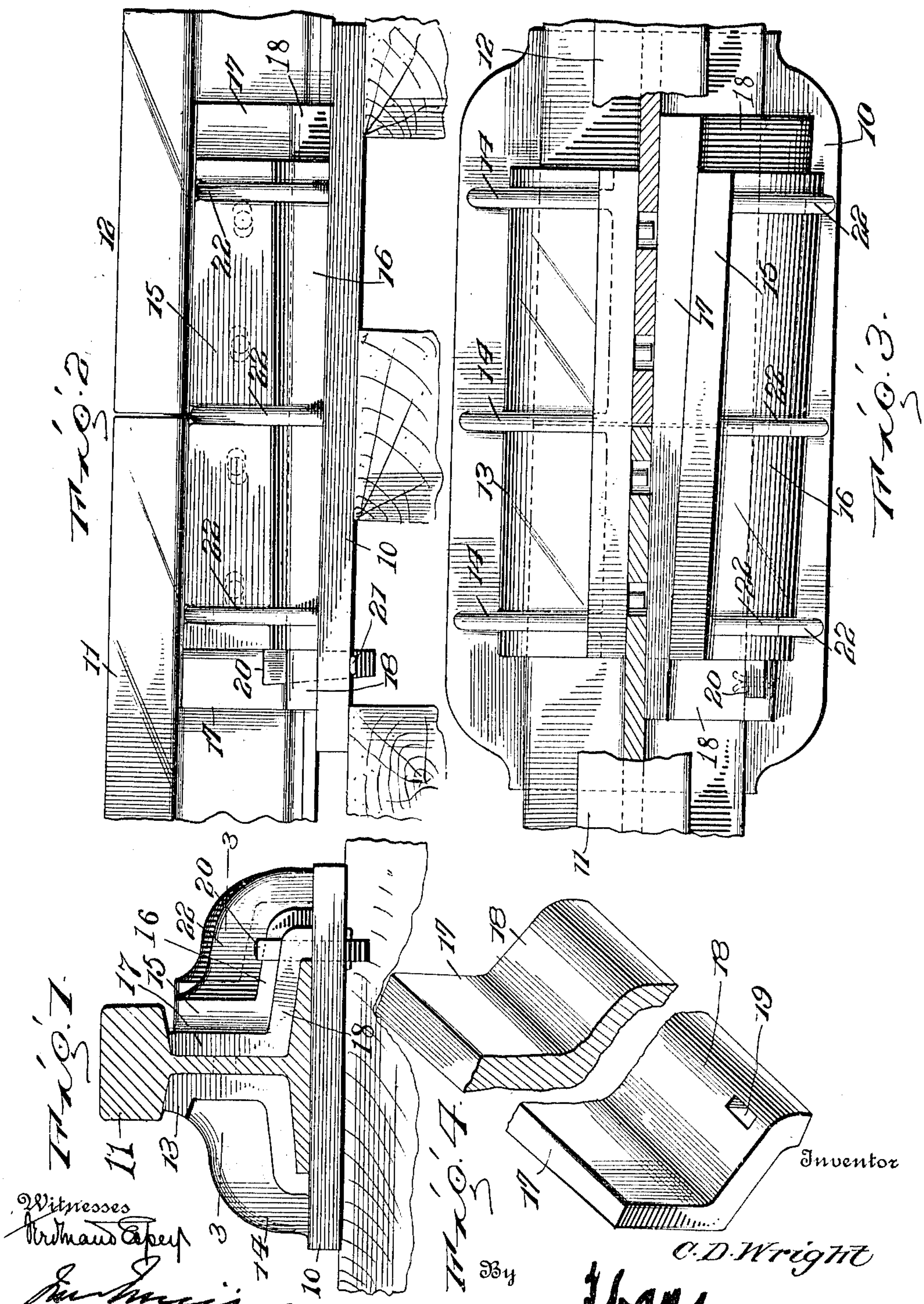
C. D. WRIGHT.

RAIL JOINT.

APPLICATION FILED JUNE 10, 1912.

1,066,775. Patented July 8, 1913.



Witnesses

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CLARK D. WRIGHT, OF HUTSONVILLE, ILLINOIS.

RAIL-JOINT.

1,066,775. Specification of Letters Patent. Patented July 8, 1913.

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To all whom it may concern:

Be it known that I, CLARK D. WRIGHT, citizen of the United States, residing at Hutsonville, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to improvements in railway rail joints, and has for one of its objects to provide a simply constructed device of improved construction and increased utility and efficiency.

Another object of the invention is to provide a simply constructed device which will effectually hold the rail ends in position without the employment of clamping bolts or nuts and like devices.

Another object of the invention is to provide a simply constructed device which will effectually hold the joint without the necessity for employing clamping bolts and like devices and which may be tightened in event of its working loose without detaching any of the parts.

Another object of the invention is to provide a simply constructed device wherein the joint is locked in position against the tendency to work loose under the severe jars and concussions to which devices of this character are subjected.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention: Figure 1 is an end view of the improved joint with one of the rails in transverse section; Fig. 2 is a side elevation of the same; Fig. 3 is a plan view with the rail in longitudinal section on the line 3—3 of Fig. 1; Fig. 4 is a perspective view of the locking key member.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device comprises a base member 10 which is in plate form and supported upon one or more ties and extending between a pair of rail ends represented conventionally at 11—12. Rising from the plate at one side is an integral clamp plate 13 which bears against the vertical web and over the tie flange of the rail ends at one side and likewise provided with an outturned upper portion bearing beneath the head portions of the rails at one side. The portion 13 is of sufficient strength to withstand the severe strains to which rail joints are subjected when in use and may be provided with brace webs 14 to increase its strength and stiffness. Rising from the base 10 at the opposite side is another plate which conforms generally in outline to the configuration of the rail and includes a substantially vertical portion 15 and an outwardly and downwardly inclined portion 16, the inner faces of the portions 15—16 conforming to the vertical web of the tie flange of the rail and spaced from the same and likewise spaced a greater distance from the rail at one end than at the other, or with the inner faces inclined to a longitudinal plane of the rail. By this means a tapered recess or cavity is formed between the members 15—16, and the rails.

Fitting within the recess or space between the members 15—16 and the rail is a key block member comprising a substantially vertical web 17 and a substantially horizontal web 18, the two parts 17—18 conforming at their inner faces to and bearing against the vertical web of the tie flange of the rail and conforming to and bearing at their outer faces against the inclined inner faces of the member 15—16. The member 17—18 is thus relatively thin at one end and thick at the other end as represented in Fig. 4. The web portion 18 is provided with a keyway represented at 19 to receive a wedge key 20 which is thus utilized to exert a drawing force upon the member 17—18 and tightly draw the same against the rail and the member 15—16. The aperture 19 is so formed in the locking member or key 17 that when the latter is positioned at the junction of the rails, the inner wall of the aperture 19 will be disposed in vertical alinement with the adjacent longitudinal edge of the base of the rail, so that by driving the locking key 20 home within said aperture one edge of the locking key will bear against the adjacent end of the brace 16 and one face thereof against the edge of the base of the rail. By such a construction, the locking key 20 forms a dual function, namely, to cause the locking member to firmly seat, and by engagement with the base of the rail to assist in preventing accidental lateral movement thereof. By this simple means the parts are firmly

clamped together and support the rail ends firmly from both lateral and vertical movement and without the necessity for employing clamp bolts or like fastening devices. A split key 21 is preferably employed through the wedge key 20, to prevent any accidental displacement of the same.

It will thus be obvious that a simply constructed joint is produced which may be inexpensively manufactured and comprises two parts only besides the wedge key. The member 11—16 may be provided with bracing webs 22 if required.

Having thus described the invention, what is claimed as new is:

1. The combination with mating rail sections, of a base extending beneath the rail sections at the junctions thereof and having one side thereof formed with an integral brace and the other side thereof formed with an upstanding web, the inner face of which is disposed at an angle to the rail sections, a wedge-shaped locking member of greater length than the web fitting between the inclined face of said web and the rails and bearing against the latter, there being an aperture formed in the small end of the locking member, and a wedge-shaped key seated in said aperture and having one edge thereof bearing against the adjacent end of the web and one side of the key bearing against the adjacent longitudinal edge of the rail base.

2. The combination with mating rail sections, of a base extending beneath the rail sections at the junction thereof and having one side thereof formed with an integral brace and the other side thereof formed with an upstanding web the inner face of which is spaced from and disposed at an angle to the rail sections, said web and brace being provided with spaced downwardly inclined reinforcing ribs, a wedge-shaped locking member fitting between the inclined face of the web and said rails and of greater length than the web, there being an aperture formed in the small end of the locking member, a wedge-shaped locking key seated in said aperture and having its lower end extending through the base and provided with a transverse opening, one edge of the key bearing against the adjacent end of the web and one side of said key being disposed in contact with the adjacent longitudinal edge of the base of the rail, and a locking pin seated in the opening in the key and bearing against the base.

3. The combination with mating rail sections having the webs thereof formed with openings, of a base extending beneath the rails at the junction thereof and having one side thereof formed with an integral brace the inner face of which is provided with spaced studs extending within the openings of the webs of the rails, the other side of the base being formed with an upstanding web the inner face of which is spaced from and disposed at an angle to the webs of the rail sections, the exterior faces of the brace and web being provided with spaced downwardly inclined reinforcing ribs, a wedge-shaped locking member interposed between and bearing against the inclined face of the web and said rails respectively, said locking member being of greater length than the web and having its reduced end formed with a vertically disposed aperture opening through the bottom thereof, a wedge-shaped key seated in said aperture and having one edge thereof bearing against the adjacent end of the web and one side thereof bearing against the adjacent longitudinal edge of the base of the rail, and a fastening device extending transversely through the small end of the key and engaging the lower end of the base.

In testimony whereof I affix my signature in presence of two witnesses.

CLARK D. WRIGHT. [L. S.]

Witnesses:

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